

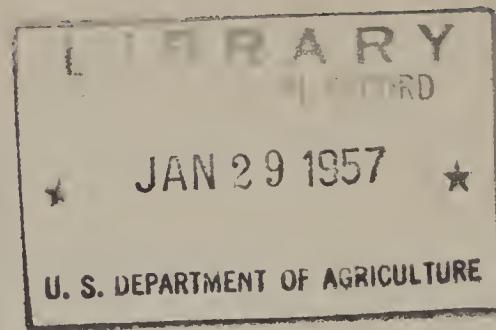
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# Helping People to Help Themselves



1956

Report of Cooperative Extension Work  
in Agriculture and Home Economics

UNITED STATES DEPARTMENT OF AGRICULTURE  
FEDERAL EXTENSION SERVICE  
Washington 25, D. C.  
January 7, 1957

HONORABLE EZRA TAFT BENSON  
Secretary of Agriculture

Dear Mr. Secretary:

I submit herewith the Annual Report for the Federal Extension Service for the fiscal year ended June 30, 1956. Totals for activities and results are for the calendar year 1955.

Respectfully yours,

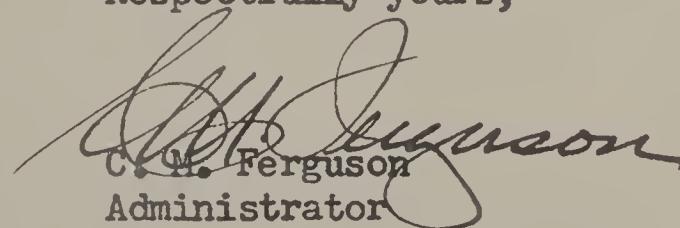
  
C. M. Ferguson  
Administrator

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### HELPING MAKE WISE DECISIONS

Francis Kottschade and his wife, Lucille, faced a grave decision --a major turning point. Their whole family life and welfare was involved. Should they switch their \$10,000 investment in dairying over into raising beef cattle and hogs, or should they stay with milk? They stood at the crossroads. For better or for worse, they'd have to live with their decision. And so would their sons, Gerald, Leo, and Paul.

Their 20 cows averaged 400 pounds of butterfat per year, well above average. And by long, hard work, they had built the herd up to this point, starting in 1947 with only six very poor producers.

Still, an Extension-made analysis showed Francis was spending undue time and labor on his cows. Moreover he would need to enlarge the herd to maintain the same family income. Meat animals or dairy --which?

To meet this problem required all their courage and common sense. They wore out a good many pencils.....they filled sheets and sheets of paper with figures.....they consulted many farm leaders for their suggestions.....they lay awake plenty of sleepless hours seeking the best solution.....nothing else occupied their minds for days and days.

Finally, after careful study, the Kottschades decided to sell the dairy cows. That was 1954. Already in 1955 they were specializing in hogs--630 of them--plus 33 feeder steers. They've increased their income and done it with less time and labor, largely through self-feeding corn cribs, hay sheds, and hog feeders.

Their 1955 gross income was \$35,000 (before expenses), twice as much as the year before. And Francis figures after he's finished building and repairing, he'll cut his labor time by 15 to 20 percent over the time required for dairying.

In making their decision, the Kottschades, from Kellogg, Minnesota, made full use of facilities offered by Herb Feldman, then Wabasha county agent, and University of Minnesota extension specialists. They've made no major change since starting farming without first consulting these and other sources for the most reliable suggestions they could get.

Starting in 1946, Kottschade, then 24, made a down payment on a rundown farm of 200 acres with \$6,000 he had saved from 4 years as hired man and a sheep shearer. Price of the farm, \$16,500. Even before he moved in Kottschade sought advice from Feldman and the Soil Conservation Service farm planner.

Perhaps some of his greatest help came from Extension Farm Management Specialist Harvey Bjerke at West Concord. Kottschade early joined the Southeast Farm Management Service, one of the two State extension groups of progressive farmers. Bjerke was the fieldman visiting members to help them analyze their records and to discuss profitable changes in their plan of operations.

Drawing on all this assistance, the Kottschades started a longtime plan to build up their farm. In 1947 corn made 45 bushels per acre, oats 30 bushels, and hay 1 ton per acre. In 1954 with improved practices, corn averaged 90 bushels, oats 60 bushels, and hay  $4\frac{1}{2}$  tons per acre. The 1947 livestock--6 poor cows, 8 calves, 3 sows, 23 ewes, and 100 chickens--had changed from an above-average dairy herd to hogs and beef cattle.

In 1947 their net worth was about \$6,500. As of January 1, 1955 it was \$42,212. And this is based on the 1947 purchase price. Present values, bolstered by his improved practices, could add another \$20,000. In addition, they've added 50 acres and remodeled their 75-year old, uninsulated, running waterless home.

To make this progress, the Kottschades have....

- Built 2 miles of terracing
- Strip-cropped the entire farm
- Applied about 27 tons of fertilizer in 1953, 1954, and 1955
- Built two cement spillways for runoff control
- Adopted a pasture rotation plan
- Seeded pastures to legumes and alfalfa-bromegrass
- Set up a 4-year rotation of corn-oats-hay-hay on contour land and a corn-corn-oats-hay rotation for terraced land.

As farm profits allowed, the Kottschades improved their home too. Among other improvements, they've....

- Completely remodeled the kitchen
- Added an electric dishwasher last year
- Installed new bathroom
- Put in new sewage disposal system.

Besides farming, the family is active in church and civic affairs. Mr. Kottschade is a member of the county extension advisory committee, president of the local Farm Bureau and secretary of his Soil Conservation Service district. Both husband and wife are influential in spreading extension teachings and findings to others.

With his farming and community record, it's not surprising then that Mr. Kottschade was chosen by the Minnesota Junior Chamber of Commerce as "Minnesota's Outstanding Young Farmer of 1955."

\* \* \* \* \*

This example, somewhat above average, personalizes Extension's philosophy of helping people help themselves. Literally hundreds of thousands of other families, scattered nationwide have made similar progress toward better living with help from extension folks and others. This report will try to portray some of this heartwarming progress of all our people.

#### WHAT WAS THE SITUATION?

First, though, to "set the stage." What economic, social, climatic, and other conditions faced extension workers during 1955-56?

Briefly, farm families faced--and survived--some severe tests. The cost-price squeeze continued to plague them as it has for some years. High investment per worker, almost doubled since 1946, made farming a high-risk business. Both these problems, of course, strained young farmers who got started after World War II to the limit. Farm output has continued to rise faster than the growing demand. Drought, floods, insect outbreaks, and hurricanes inflicted severe losses. And 1956 acreage allotments cut 1955 acreages of cotton, rice, and tobacco.

At the same time off-farm income continued to rise and farm prices strengthened slightly to alleviate the situation somewhat.

#### Cost-Price Squeeze

Except for 1951 (Korean war) agriculture has continued to receive a proportionally smaller share of our national wealth ever since 1946. Between 1946 and 1955, net farm income as a share of national income dropped from 11.2 percent down to 5.4 percent. The drop, 1954 to 1955, was from 6.0 to 5.4 percent.

While falling prices are part of the picture, the cost-price squeeze continues primarily because of rising costs. Farmers not only require more and more machinery and other production costs, but costs of these have risen or remained steady at a high level. In 1955 the average investment in land, buildings, and equipment for each farm worker stood at \$14,400. This compares with \$7,500 in 1946. That's an 86 percent jump.

Naturally this high investment creates financial problems in starting farming today. And sometimes the only way an established farmer can continue farming at a profit is to enlarge his farm and thus increase his investment. Efficient farming in the face of high investment and high costs was a major challenge.

Farm output kept on rising even though farm population kept on falling. Despite our expanding national economy and increasing population, farm production has simply gained faster than the growing demand and therefore farm income has suffered.

Although total farm income has dropped appreciably since 1949, total income per farm person from all sources has gone up 16 percent during the same period. Why? About a 20 percent drop in farm population and the fact that income from nonfarm sources now makes up about 30 percent of the total income of farm people.

#### Other Conditions

Then too, disasters wrought havoc, requiring emergency measures and longtime repair work. Floods in California, hurricanes along the Eastern coast, drought in the Great Plains (for the fourth year in a row in some States), and a surprise insect outbreak of the dreaded "Med Fly" in Florida....all these called for fast action from county extension staffs especially to relieve critical conditions.

Another factor, especially in Southern States, was the smaller national acreage allotments. Cotton, tobacco, and rice growers voted for reduced acreages in an effort to reduce supplies and strengthen prices.

#### National Acreage Allotments

	1955 Crop Year	1956 Crop Year	Change from 1955	
			Percent	
Cotton	18,113,208	17,391,304	721,904	Less 4% Less
Tobacco (all)	1,531,600	1,392,269	139,331	Less 9% Less
Rice	1,927,734	1,639,084	288,650	Less 1 $\frac{1}{2}$ % Less
Peanuts	1,610,000	1,610,000	Same	Same
Wheat	55,000,000	55,000,000	Same	Same
Corn	49,842,697	43,280,543 1/	1/	1/

1/ Before planting time the corn allotment was replaced by a 51,000,000 base acreage in the 1956 soil bank legislation.

In this total picture Extension Service carried on its longtime philosophy of "helping people to help themselves." Extension worked with people in their own situations to lead them to something better.

All told, the longtime economic picture looks both basically sound and encouraging. Increasing export sales, a revised farm program, an expanding national economy, a sound financial position generally, prospects of improving prices, and above all the confidence of farm people in their own longtime future--all these and other factors point toward promising years ahead.

A major challenge facing Extension is to help farmers increase the efficiency of their business and to adjust their productive capacity to market demand. Two other vital needs are: First, to help farm people understand the fundamental causes of national and community agricultural problems so they may cope with these conditions better to neutralize them or adjust to them; and second, to help improve efficiency of the marketing system.

#### ACHIEVEMENTS

##### What then is the record for 1955?

Two facts need emphasis at this point. First, the progress shown would have been much less without the fine cooperation of many other groups. At least 15 other Federal agencies; scores of private groups in industry and business; all sorts of farm organizations; hundreds of State and county health, highway, agriculture and other agencies....all these and others definitely aided extension work. Such teamwork benefits all cooperators.

Second, and far more important, these figures tell only part of the story. Their true meaning lies in the progress of people toward better living. The story of their accomplishments--what they did--is the true measure of any success in Extension's cooperative efforts. The figures in brief:

**TOTAL:** Assisted 9,635,000 families 1/ (new record) to make some change in their practices--UP 7% from 1954

42.4% farm  
21.1% rural non-farm  
36.5% urban

(All figures estimated by county agents)  
1/ After removing duplications.

##### FARMING:

Assisted 6,110,000 families--UP 5%  
One-third more than 1952

HOMEMAKING:

Assisted 6,135,000 families--UP 7%  
Almost doubled since 1952

4-H CLUBS:

2,156,000 members enrolled--UP 2.4%  
New record for 11th consecutive year

OLDER YOUTH: (18- to 30-year olds)  
290,000 persons reached

(All figures estimated by county agents)

Listed below are some of the areas in which agents gave educational assistance during 1955. In many cases, one family or individual was given assistance in several different areas.

Assistance to Farmers--1955

Number of farmers and other individuals adopting agricultural recommended practices

Crops

Grain crops	1,952,258
Hay and pasture	1,712,565
Cotton	749,865
Tobacco	415,985
Oil and sugar	244,445
Fruits and nuts	791,135
Vegetables including potatoes	1,608,271
Flowers and shrubs	1,208,762

Livestock

Dairy animals	1,643,675
Poultry and products	1,051,873
Beef cattle	1,291,621
Sheep, goats and products	347,734
Swine	945,621
Other livestock and products	91,497

Soil and water conservation

1,917,250

Forestry

605,353

Wildlife

250,606

Planning and management of farm business

1,508,908

Farm buildings

353,266

Farm mechanical equipment

525,913

Assistance to Homemakers--1955

Number of families, homemakers,  
and other individuals adopting  
recommended practices

Housing and surroundings	1,624,541
Home furnishing and equipment	2,350,559
Home management	1,487,265
Family economics	874,277
Clothing	3,389,278
Foods and nutrition	4,362,200
Health	1,649,096
Family life	1,691,825

4-H Activities--1955

2,156,000 members--70% of them under 14 years old

64% from farm homes

22% from rural nonfarm homes

14% from urban homes

Boys and girls carry on their chosen projects through  
89,580 local clubs, with valuable aid from  
358,000 volunteer, lay leaders.

Members completed 3,562,000 individual projects worth  
literally millions of dollars nationally

504,000 meal planning and preparation

225,000 health-nursing-first aid

563,000 clothing

138,000 home furnishings and room improvement

210,000 vegetable gardening

136,000 swine

137,000 canning and preserving

110,000 home grounds beautification

128,000 poultry

51,000 tractor maintenance

METHODS USED

To plan a program responsive to people's needs requires working basically "from the bottom up" rather than "from the top down" to more fully serve the people in their self-improvement efforts. Extension program starts with 28,750 county advisory committees with a membership of 670,000 men and women who map out their own educational programs based on their needs. It is conducted by 10,800 extension workers in 3,150 agricultural counties in the United States, Alaska, Hawaii, and Puerto Rico, with the assistance of voluntary local leaders. Aid, as

requested, is given by 2,850 agricultural and home economics specialists and supervisors located at land-grant agricultural colleges. One hundred and four Federal Extension Service program leaders give further aid as needed.

To carry out the people's educational programs, extension workers used many teaching methods:

Methods of Reaching People

21,650,000 personal contacts UP 2%

9,500,000 phone calls

8,035,000 office calls

4,115,000 farm and home visits

76,500,000 total attendance at all meetings UP 3%

56,750,000 (74%) at 1,400,000 meetings held by county agents

This includes 1,235,000 different persons trained by agents to be local leaders.

These volunteers in turn taught

20,000,000 others (26%) at 1,250,000 local meetings

Supervised 193,000 result demonstrations DOWN 3%

Wrote 825,000 news stories SAME

Appeared on 15,100 TV shows - new record UP 8%

Broadcast 228,000 radio programs - new record UP 11%

Distributed 27,800,000 publications UP  $\frac{1}{2}\%$

PROGRAM PROJECTION--THE FAR LOOK AHEAD

Perhaps the most far-reaching effort of 1955-56 was program projection. Its purpose--a continuing program of long-range, county program planning. Program projection is a group method used by extension workers and farm people together to develop a sound, longtime extension program. It requires the participation of, and intelligent decisions by many people concerned with an efficient and prosperous agriculture and better rural family living in their county. It's a new method because it emphasizes the long-range aspect of program planning.

Program projection grew out of the recognized need by State extension directors and farm leadership for a dynamic, longtime plan that meets the real needs of the people.

The objectives of program projection are:

- (1) To involve more people, including farm organization leaders, in making decisions about extension programs.
- (2) To help farm people identify the resources they have, recognize where they want to go, and develop a means of attaining the goals established.
- (3) To help extension workers make intelligent appraisals of the educational job required to meet the real needs of farm people.

In projecting a program, people go through five basic steps. They (1) gather data to reveal the total agricultural and other conditions in the county, (2) analyze this information to determine their broad problems, (3) seek out the resources available to meet these problems, (4) decide which problems to attack, and (5) map out a program of positive action.

During 1955 people in 394 counties carried on program projection. This represents 8 percent of all counties making a 5- to 10-year analysis of their problems and possible solutions. The Federal staff has aided county efforts by a comprehensive study trying to project for the next 10 years the socioeconomic conditions in seven major parts of our national economy.

County people have responded eagerly to the expanded opportunity to help plan their own educational programs. In Maine some 160 persons took part in two county studies. In Arkansas well over 20 percent of farm families in Bradley County helped think through their study. In Hampden County, Massachusetts, 20 percent of the 225 people involved in program projection were new to extension work. In Georgia officials are convinced the most significant thing in program projection is this involvement of people.

Incidentally in Sawyer County, Wisconsin, county agent Sherman Weiss chose 9 husband-wife teams among the 30 persons on his citizens' planning group, because says Weiss, "We're taking into consideration the needs of the entire family in our program."

The main recommendations made to date by county program projection committees fall into the following categories:

1. More complete use of land and better land-use practices.
2. More efficient use of labor (including farm operator and his family's labor).
3. More efficient production of crops and livestock.
4. More and better markets and marketing practices.
5. Improved quality of products produced.
6. More and better food for better nutrition and health.
7. More intensive educational programs for men, women and youth.
8. More training for 4-H members in operating the farm business and in home management.
9. Extension workers hold special group meetings for women unable to attend home demonstration clubs.
10. Extension workers make more personal visits.
11. Extension workers conduct a more intensive result demonstration program.
12. Extension workers do a more intensive public relations job to inform nonfarm people of farmers' problems.

#### County Program Projection Plans

With this background then, here are excerpts from county reports on their plans for program projection work. They reveal deep concern over the problems and sound thinking in analyzing them.

"The economy of Franklin County, Illinois, has long been based on coal mining. Agriculture has received little recognition as a source of income for the county. Small farms and low income have handicapped the farmers. Low volume of business....reluctance to use credit....low soil fertility....lack of readily available markets....drought for three successive years, lowering farm prices....all of these have spelled a low standard of living.

"The most promising thing about agriculture is our potential. We have the opportunity to become one of the top agricultural counties in Southern Illinois....our agricultural income is less than \$3 million. The potential yield of crops that have been proven practical could easily raise this to \$15 million...."

In Iowa the statewide program of work set forth what the people wish to do toward a solution, the how or methods to be used, who is to assist, and when.

In Vermont the people in the counties feel the need for having extension do more work in the fields of (1) prices and marketing; (2) human relations, especially with people in the older age brackets; (3) home demonstration program; and (4) local governmental problem areas. But continue about the same emphasis on work in the production fields.

In Wisconsin the Outagamie County report illustrates the trend of thinking by farm people there:

"Of increasing significance is the population trend to urban and rural nonfarm areas."

"The major limitation to completing the program as outlined by this year's committee and other phases of the total extension program is lack of professionally trained personnel. The greatest need is in the field of youth and home economics."

#### Results Already?

But aside from looking ahead to future plans, we might also ask, "What effects has program projection already had, young as it is?" Briefly, results have been most encouraging.

In Minnesota while no plans have been put into operation yet, definite gains have still shown up from making these plans. Here are four widely different examples.

In many counties its agriculture has been studied thoroughly for the first time by local citizens. Even experienced agents admit they know their counties much better.

In one county, program projection meetings convinced many people that the extension program did not belong to any one group or organization. Broader, deeper understanding of extension was an immediate result.

In this same county people realized that suburban areas needed extension educational programs too and that extension could also reach these areas.

And in another county the county auditor realized that the scope of the extension program included nonrural people in that metropolitan area; he now understands and supports extension work fully for the first time.

In Merrimack County, New Hampshire, juvenile and parent delinquency were named consistently as major problems. Vitally needed were a parent-training program on child development and an organized program for leisure time for people of all ages. To provide this adequate program, a recreational council of voluntary leaders looked like the best solution. Home demonstration and 4-H Clubs will play important roles in this new program.

Program projection work in Massachusetts has produced better team cooperation among county staff members because they have worked more closely together on county needs. And county officials understand the total county extension service and important county problems better.

Montgomery County, Virginia, has gained two things from program projection. "It has brought people together and helped them see their needs more than any other extension planning program we've ever had," declares T. M. Hepler, county agent. Just as important, other necessary projects like rabies control, health and nutrition programs, and general cleanup are getting renewed stress. No longer is extension's program decided solely on the basis of economic importance of various farm products.

Spartanburg, South Carolina, county people have developed a comprehensive plan for their highly industrialized county. This county has 180 industrial plants, and a multi-million dollar peach industry, as well as cotton, grain, corn, truck crops, dairying, poultry, beef cattle, and forest industries. The projected program calls for aiding more families in developing overall plans better suited to their individual farms and homes. The community development program will be expanded, as will the dairy, hog, poultry, pasture and feed, peach, forest management, insect control, conservation, and family living projects. The aim of all this is to increase efficiency, get maximum farm income, and use this income for the greatest benefit of the entire family.

North Carolina leaders say program projection is turning up many opportunities for expanding net farm income. And it is pointing out adjustments that extension should make to be more useful to the people.

And Ohio people are proud that extension personnel have confidence in their judgment in recommending the work needed in the years ahead.

From this firm foundation and promising start, program projection should go far in the coming years to center extension efforts more pointedly on meeting peoples' most pressing problems.

#### FARM AND HOME DEVELOPMENT--FAMILIES TAKE INTENSIVE LOOK AT OWN PLANS

Aside from a good start this first year in the new program projection idea, another effort, organized in 1954, more than doubled in scope during 1955. This was farm and home development work with individual families. The increase was due to the demand by farm families for assistance offered under this program.

From 19,600 families enrolled before 1955, an additional 29,000 families were added during 1955. The number of counties conducting this work increased from 891 before 1955 to 2,154 at the end of the year. These 2,154 counties represent about two-thirds of all counties in the country. And this expanded service was accomplished without any increase in staff in 1,674 counties. Naturally though, where more county agents could be added, appreciably more families could be aided.

Farm and home development, also called balanced farming or farm and home planning, is a way of helping farm families recognize, approach, and gain their family and business goals. The program involves helping families recognize their opportunities, appraise their resources, and make the most effective use of their resources through wise choice and combination of enterprises. It means applying, in a coordinated manner, a great amount of technological, economic and social knowledge to the farm and family problems.

Farm families have asked for this aid because of larger size farms, fewer workers, more complex technology, higher capital investment and greater financial risks. They want to appraise their farm units to develop the best long-range programs as well as short-run changes.

For fiscal 1955-56, most of the \$5,800,000 increase in Federal funds over 1954-55 was used for 1,113 new personnel to concentrate largely on farm and home development assistance.

These funds and personnel helped produce some tangible results during 1955. With these resources it was possible to aid

26,633 families to improve cropping practices  
25,535 families to analyze farm operations  
24,709 families to set goals  
21,351 families to inventory resources  
20,740 families to improve livestock practices  
18,874 families to analyze family living operations  
18,550 families to improve their food supply

and thousands of others to improve their farm buildings, machinery and equipment, home, farmstead arrangement, and home equipment and furnishings.

Significantly, in 12,000 families the children helped develop the family's farm and home plan. And in 10,000 families the 4-H Club member's project work directly supports the family's farm and home plan.

Aside from these individual family gains, farm and home development has produced some highly worthwhile group benefits.

For county workers, it has brought about a team approach to helping farm people solve their problems of modern farming and living. Even more important is the family teamwork that typifies farm and home development in all its stages.

Secondly, the program has helped extension workers become better informed and more effective teachers.

Thirdly, it has opened up new opportunities. An Indiana survey of farm and home development families showed that these families had the potential for increasing net income by an average of \$3,000 per family. In one county alone the potential increase was 94 percent, using current farm prices.

Farm and home development also has helped to identify new local leaders which extension work had not previously revealed.

And the program is giving many families their first direct and effective contact with extension aid. A statewide Maryland survey reveals that 75 percent of the farm and home development families are new extension cooperators.

#### Examples of Improvement

To be specific though, what gains have some farm and home development families made?

The progress of 64 families in Pike County, Mississippi, illustrates what can be done where additional personnel have been added. After their first full year of participation, these cooperating farmers averaged 4,247 pounds of milk per year per cow, or 71 percent above the average. Their beef calves sold for 37 percent more than the average price, due to higher quality. Corn yields were up 113 percent and cotton yields up 35 percent per acre. Values that can't be measured are improved diets, painted homes, and better farm family living.

Progress in 1 year by cooperating families indicates that gross farm income could be increased 48 percent during the next 5 years. But all this progress reveals more of a challenge than a feeling of satisfaction--a challenge to eventually extend this counselling assistance to every farm family in the county desiring it, according to the county report.

In Macon County, Alabama, a farmer has decided one major change he needs is to adjust his livestock program for top efficiency. He once operated 1,000 acres of land, including 600 rented acres, but his 250 brood cows averaged only about a 45 percent calf crop, compared with about 85 to 90 percent as normal. Now he plans to increase his efficiency by cutting the size of his herd to fit his labor supply. He decided to cut down to 125 high quality animals, improve his feed and pasture program, test all cows for Bang's disease, and treat all yearlings for blackleg.

While this case shows only one part of his total farm plan, he and his family decided on their overall plan on the basis of family needs and desires, total resources, and good farm and home management practices.

In Sumter County, Georgia, the V. L. S.'s have made typical farm and home development progress during 1955. By adding 53 acres of permanent pasture, they almost doubled pasture acreage. This expansion enabled them to buy 60 steers in the spring to be pastured until fall and then fed out. They've also bought 24 Hereford cows and one purebred Hereford bull as a start toward a 50-cow-herd.

The assistant county agents also helped Mr. S. to use pre-emergence spray equipment in 1955 for the first time. He uses the same equipment at planting time to control weeds in cotton and peanuts and later on to spray cotton for insects, and to spray livestock too.

A new implement shed, part of the farm improvement plan, helps him take better care of his farm machinery and trucks.

The S.'s have improved their home too by adding three rooms and a bath and rearranging the kitchen. They've also included a spring garden to furnish fresh fruits and vegetables, plus a surplus for freezing. Mrs. S. put up 180 quarts of vegetables, 250 pounds of beef and pork, and 25 broilers--which she grew herself--into the freezer locker in 1955.

With moderate progress to date, yet with many opportunities for further improvement, farm and home development seems destined to continue helping people in their self-improvement efforts on an increasing scale.

#### TWO REGIONAL EFFORTS--CLEAN GRAIN AND DROUGHT RELIEF

Two other efforts, regional in scope, also commanded major attention from extension workers. They were the clean grain program and Great Plains drought assistance.

In the clean grain program, the biggest challenge for 1955-56 was to help farmers, handlers, processors, and distributors meet the new sanitation standards for wheat in interstate commerce. Such wheat is subject to seizure if it contains one or more rodent pellets per pint, or 1 percent or more by weight of insect-damaged kernels. This new tolerance took effect July 1, 1956.

To meet this challenge, extension workers in grain states intensified their educational efforts. Training schools, demonstrations, news stories, radio and TV programs, magazine articles (the whole issue in one case), newsletters, movies, visual aids, and other methods were all coordinated into major, sustained campaigns in most grain states.

Kansas and Ohio are typical examples of results from this stepped-up effort to meet higher sanitation standards. The Kansas Grain and Feed Dealers' Association, Kansas Wheat Improvement Association and Kansas Extension Service jointly conducted the program there. As a result an estimated 1,290,000 bushels of wheat were saved from being diverted from food to feed use because of insect or rodent contamination. This meant an extra \$648,310 income to Kansas growers.

In Ohio grain quality has definitely improved in recent years. The percent of wheat at Ohio inspection points which graded No. 1 and No. 2 rose from only 42 percent in 1951 to 95 percent in 1953. Later figures are not available.

From the beginning the total effort has been highly cooperative. State and Federal agencies, farm organizations, all parts of the grain trade, regulatory and educational groups have teamed together. One small example: In North Dakota 1,688 4-H Club members inspected nearly 2,700 bins on farms in 39 counties to determine what control measures, if any, were needed for safe grain storage. In addition boys from 35 FFA chapters (Future Farmers of America) inspected hundreds of other bins.

The other regional program, Great Plains drought assistance, covered part or all of each of the following States: Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. Some parts of this area had endured drought for four consecutive years; others experienced the worst drought on record during 1955.

The Extension Service, Farmers' Home Administration, and other government and private agencies united in a concentrated effort to relieve this rural distress. The purpose was to correct the causes of the problem, not just the effects. Longtime stabilization of agriculture in the area was the aim. Eight States were allotted a total of \$419,300 of special need funds during fiscal 1956 to strengthen extension work in the Great Plains area. This was one-half the total amount of special need funds available for all USDA agencies.

In Colorado agricultural leaders tied in the program projection work of longtime, total program planning to their drought problem. They concentrated program projection work in 17 southeast counties where the wind erosion problem is most severe.

In these same 17 counties farm and home development work is resulting in production adjustments on several farm and ranch units. These examples may well set a pattern as to the type of farm organization best suited to a permanent type of agriculture for the Great Plains area.

#### SOLVING FARM PROBLEMS

##### Cost Cutting

Cost cutting was a major nationwide problem facing farm people and extension workers alike. To work out solutions required clear thinking and sound farm management decisions. Iowa printed 125,000 copies of a booklet, "Cutting Costs in Today's Farming," including a check sheet of specific things a farmer could do. These were distributed during about 210 meetings over the State, led by State and county extension workers. This information also was organized into four TV shows.

Here's one example of specific results: P. B., a Decorah, Iowa, farmer cut his hog feeding costs \$2,700 during 1955 after State specialists had noted his unduly high cost for purchased protein supplement and had recommended steps to reduce it.

Notice that this man cut his costs without increasing his production. This is highly important in these days of surpluses. Following are seven other such cost-cutting examples.

1. The Texas cotton specialist reports a saving of \$20 per bale when farmers use mechanical cotton pickers. One-third of the State's crop was harvested this way--a saving of \$33,750,000. Texans saved another \$12,383,000 on cultivating costs by using tractor-mounted, 4-row rotary hoes.

2. O. W., Jefferson County, Indiana, saved two-thirds of the cost of a new corn crib. He could have paid \$4,900 for building materials, excluding floor and foundation, but his county agent suggested using timber from his own 30-acre woodlot instead. By using his own labor Mr. W.'s total cash outlay, including floor and foundation, was only \$1,700.

3. In Pennsylvania about 800 fruit growers received fertilizer recommendations from orchard specialists after sending soil samples to Penn State University. Growers like the balance of a 10-10-10 fertilizer costing about \$60 a ton. But by using a 0-20-20 mixture plus ammonium nitrate, they supply the same plant foods at a saving of about \$10 per ton.

4. With livestock, a Texas rancher with 115 beef cows formerly produced 43,000 pounds of beef. To reduce costs, he culled his herd to 84 head of the best producers and still produced 61,000 pounds of beef. The three cents premium for his better quality calves produced after culling enabled him to earn about \$1,000 more--even though he sold 2,000 pounds less beef.

5. To reduce labor costs California extension folks pointed out to growers a new type of bean-stringing machine. In one year nearly 90 percent of the pole bean acreage was shifted to mechanical stringing. This method saves about 60 percent in labor costs, compared to hand stringing.

6. In New York extension men advised growers on construction and operation of 5 new bulk storages for onions built during 1955. Total capacity is about 250,000 bushels. Estimated savings are 25 cents per bushel, or \$62,500 in one year--without materially lowering quality and without increasing production.

7. Because he attended a hay drying demonstration, L. A., Colorado rancher, made better quality hay and thereby saved \$2,300 in grain costs last year. He now puts up 350 tons of hay with the help of his wife and a hired girl.

#### Efficient Production

But extension help covered more than the immediate problem of cutting costs. It also extended to longtime, efficient production.

\* \* \* Soil tests reveal the amount of available plant foods in the soil and thus help farmers to fit the fertilizer to the soil and to the crop as never before. These tests are available to most farmers through their county agents or private firms at low cost. Farmers who use them reap the full benefits of their \$800 million yearly investment in fertilizer.

In Goodhue County, Minnesota, seven farmers had their soil tested and fertilized accordingly. Five others did not bother with tests, yet used the same amount of fertilizer. Records show that the seven men who relied on tests profited \$33.76 per acre over fertilizer costs; those who did not gained only \$16.31. That's a bonus of \$17.45 per acre for testing.

During 1955 Illinois farmers alone had over 369,000 soil samples tested. Wisconsin reported 130,000; Missouri, 103,000; North Carolina, 93,000; Virginia, 56,000; Michigan, 53,000; and many States, up to 50,000.

\* \* \* Growing the right crop variety often affects returns decidedly too. During 1955-56 extension people and others staged an intensive campaign to point out to Kansas growers the need and opportunity to change to wheat varieties with a strong gluten content. During the fall of 1955, 1,504,000 acres were changed to newly recommended varieties with better milling qualities. The estimated increase in sales value during 1956 from these improved varieties was just over \$4,500,000.

\* \* \* In the 12 Southern States pastures are replacing more than half the 28 million acres taken mostly out of cotton, tobacco and peanuts in recent years. Coastal Bermuda is tailor-made for southern livestock men, but it produces no seed. Instead it propagates by runners and these cannot be moved easily.

To meet this problem, extension workers developed the idea of establishing nurseries widely as sources of sprigs (planting stock) for local farmers. As a result county agents in Georgia and South Carolina are responsible for establishing one or more nurseries in every county.

County agents also have set up a great many field demonstrations to show the advantages of Coastal Bermuda and how to grow it. Records show average returns equal to 4 tons of hay per acre, easily worth \$100. South Carolina alone had 414 demonstrations last year, almost 9 per county.

Coastal Bermuda also is slow to plant; 5 acres per man per day is a good rate. Despite this difficulty, Georgia and South Carolina farmers have each put in more than 350,000 acres. Both States have immediate goals of 1 million acres. All States from Texas eastward have put in substantial acreages. With this more reliable feed supply, livestock is expanding greatly and adding much to southern farmers' income.

\* \* \* Efficient production also means wise choice, use and care of mechanical equipment. In California, Wyoming, and Arizona, representing 97 percent of the total certified alfalfa seed grown, combine harvesting of small seeded legumes has been improved through a strong educational program to cut down seed losses during harvest. As a result Wyoming and Arizona growers have each gained \$100,000 more income per year, while California growers added \$462,000.

\* \* \* With meat animals, beef producers now have a new method of selecting animals for breeding or fattening. It's called the weight-for-age system. This on-the-farm performance testing plan enables farmers to increase average weight of weaned calves 10 pounds and yearlings 20 pounds each year through selection based on records. Extension services in 23 States now have organized programs with cattle producers. New Mexico reports more than 200 purebred herds in this program; one herd owner boosted his average yearling weights 150 pounds.

Another aspect of beef improvement is the use of improved bulls. In New Mexico this practice has increased production per cow by 2 to 3 percent, resulting in \$3 to \$4 million added income annually.

\* \* \* Efficient dairying also commands major attention from extension workers, as shown by H. I., Wisconsin dairyman. His mechanical hay drying unit, installed only 5 years ago with extension advice, has already saved him more than twice what he paid for it. The drier, costing \$2,600 has cut his annual feed bill for 41 cows by \$1,500 -- from \$2,100 down to \$600 - by improved hay quality.

How does mechanical mow drying boost hay quality?

"First, you save the leaves by putting the hay in a little earlier after it's cut," Mr. I. says. "Second, you're more apt to get the hay cut and in the barn when it's at its best. In other words, you're getting nearly all that good legume value in the barn."

Wood County Agricultural Agent Leo Schaefer and his staff helped Mr. I. plan his grassland farming program, including better production of forage crops and mow hay drying.

With the drying unit in his 36- by 120-foot dairy barn, "We can chop hay with up to 50 percent moisture content and shorten drying time too," says the farmer. On operating costs, which are moderate, "We usually figure anywhere from 50 cents to \$1.50 a ton for the drying, depending on the moisture of the hay and the weather," he adds.

Judging from the cows' records, they like the nearly 100 percent roughage ration. They're producing about 400,000 pounds of milk annually.

\* \* \* Of course, research studies by college, USDA and other scientists supply the basic facts for any extension educational program. Largely because he put research to work, Kit Bradley, 4-H Club boy from Easton, Maryland, took the blue ribbon in his district junior Chicken-of-Tomorrow broiler contest in 1956.

His Vantress crossbred birds averaged 3.6 pounds each at 9 weeks of age and he used only 2.4 pounds of feed for each pound of gain. This is one-half pound more weight in one week less time and on one-fourth pound less feed than his father's record in the national contest five years ago--a typical example of more efficient production through research.

Federal, State and county Extensioners helped 500 industry folks to plan and conduct the first national Chicken-of-Tomorrow contest in 1946. Since 1950 Junior contests have been emphasized. During 1956 4-H'ers will grow out some 350,000 broilers in this contest.

\* \* \* Fast-growing demands for more water, dwindling supplies in some areas, inefficient use of irrigation water (the nation's greatest water user), and more serious droughts--that's the picture nationally on water supplies and use.

Therefore, Extension's work on irrigation, spreading nationwide, emphasizes better use of water. To accomplish this, many agencies have joined in a widely cooperative program--agricultural college personnel, railroad agricultural agents, industry representatives, Federal land bank people, folks from six other government agencies and others.

Specifically, pipe lines and lined irrigation ditches have been recommended to conserve water, reduce labor and control weeds. In the high plains of Texas one firm alone in 5 years has laid over 1 million feet of underground concrete pipe to stretch that area's fast-depleting water supply.

\* \* \* With fruits, vegetables, and specialty crops, growers likewise have improved their production efficiency. In 1955 Ohio tomato growers, following the complete disease control program recommended by the Ohio Extension Service, increased their yields by 3 to 4 tons per acre, and their grades as well. Ohio's average tomato yield was nearly 12 tons per acre in 1955, compared to about 6 tons in 1945. During the same period growers have increased the average number of sprays from less than 1 to 5 at present.

In California, growers of walnuts, almonds, apricots, peaches, pears, cherries, and other fruits are now enjoying the benefits of the highest production per acre ever attained. Efficient orchard management--applying research "know-how"--is largely responsible for 40 percent to almost 300 percent yield increases since 1938-42.

Modified pruning of trees, plant growth regulators to prevent fruit drop, new chemicals to control insects and diseases, nitrogen fertilizer and wise use of water--all these have increased Bartlett pear yields markedly. The same general story applies to about 10 California fruit crops. Growers' success has been due to following detailed and accurate orchard management practices developed through research and fitted to local conditions by farm advisers (county agents).

In North Carolina tobacco growers learned through 46 result demonstrations how they could obtain excellent control of wildlife disease on tobacco plant beds by using streptomycin as a spray. The new treatment has been widely used in 1956.

In fact, the adoption of plant disease control measures has increased the value of crops in Kansas alone by an estimated \$29 million annually.

\* \* \* Insect control efforts also paid off in huge sums. As a result of insect and rodent control programs, Louisiana farmers realized about \$125 million more gross income in 1955 than they could have earned without these programs.

For boll weevils alone, Louisiana growers gained an estimated \$27 million in 1956 by following new control recommendations. In some areas during 1955 the insect apparently developed resistance to chlorinated hydrocarbons, then recommended. As a result calcium arsenate and methyl parathion were recommended in these areas for 1956.

To quote a letter from the president of a state farm organization to the Dean of Agriculture at Louisiana State University:

"....The Extension Service is to be commended for carrying this story to the individual farmer with such effectiveness that more than 90 percent changed to the new recommendation. It is difficult to place dollar value on these services, but....it is our conservative estimate....that the crop would have been reduced by \$27 million statewide ...due to insects....In the higher yielding sections of the State your recommendations increased this year's income \$150 per acre of cotton.

"As you well know, this stopgap program....is not satisfactory for a long-range program, because--first, methyl parathion is deadly toxic to humans, and--second, calcium arsenate is dangerous to livestock, soybeans, pecans, rice.... The long-range solution will not be arrived at until we find materials as effective and safe as chlorinated hydrocarbons were.

"I understand you have inaugurated in cooperation with the USDA some fundamental research on resistance of insects to insecticides. I wish to congratulate you on this step, since many farmers think this field has been too long neglected. We recognize that our efforts to place agriculture on a sound economic basis will be of no avail if the insect problem is not licked...."

In 1955, Illinois specialists recommended soil chemicals to control damaging corn insects on a trial basis only. In 1955 after a strong educational campaign, 690,000 acres were treated. Farm advisors reported that just over 1,500,000 acres of all field crops or soil were treated for insect control with a profit from treatment of nearly \$14 million.

In Oregon, potato growers in Deschutes County alone saved \$33,000 by lower cost application and more effective control of at least six major insect pests by using soil insecticides.

\* \* \* Much of our Nation's timber is controlled by  $4\frac{1}{2}$  million small woodlot owners. These farmers seek aid on widely differing subjects--mechanical tree planters, thinning, fire control, timber sales, even growing Christmas trees as a cash crop.

Tree planting on idle farmland continues to be a major program. This widely cooperative effort includes pulpmills, lumber mills, banks, State forestry departments and other agencies. Last year the Florida Extension Service through county agents distributed a record 16 million pine trees provided free by pulp and paper industries. Georgia, Mississippi, North Carolina, Pennsylvania, New York, and Ohio have also conducted large-scale planting programs to stop erosion, reforest cutover land, and put idle or diverted crop land to work.

Largely due to earlier tree-planting programs, 18 million cords of pulpwood were produced in the Southern States in 1955, much of it on small farm woodlots.

On a more personal scale, a Person County, North Carolina, farmer received a "top" offer of \$1,900 for his small tract of pine timber. Not satisfied with this, he called his county agent who in turn asked the extension forester to meet with the owner and potential buyer. And inspection showed the timber was worth \$4,300. The buyer accepted this figure, cut the tract, and was so well satisfied, he asked the forester to come back and teach him timber sampling procedures!

\* \* \* Somewhat aside from efficient production, but still highly significant, is the work on cotton picking and ginning. Improper machine-picking, handling, and ginning were causing excessive losses to spinning mills in early 1955. The problem was how to reach owners of mechanical pickers, operators, and ginners with a far-reaching educational program to reduce losses. In May 1955 the National Cotton Council invited extension agricultural engineers, research engineers, and manufacturers of mechanical pickers to plan such a program.

Cooperating closely, these four groups prepared a coordinated educational program involving State specialists, county agents, and local machinery dealers. Ginners, farm organizations, and others joined in the effort. The program quickly reached into the principal trouble spots throughout the Cotton Belt.

In less than 4 months, an estimated one-half of all the owners of mechanical pickers in the United States, and an estimated one-half of all operators in the country, had attended area or community schools to learn more fully about proper operation and maintenance of pickers. Close, cordial cooperation among research, industry, trade groups, ginners, extension folks, and others made this broad-scale program possible. Cotton growers, processors, and consumers stand to gain millions of dollars through higher quality.

Another program, begun in mid-1955, will be pushed intensively during the next 2 or 3 years. It involves cooperation among farmers and ginners at harvesttime to group like qualities of seed cotton with similar trash and moisture content on the gin yard and then gin them at one time. This new procedure cuts out the loss of \$6.50 to \$16 per bale which occurs when cotton of different quality is ginned in the same order as it arrives at the gin yard.

An estimated one-fourth of mechanically-harvested cotton is now being grouped at gin yards in an attempt to avoid these losses. Ginners are powerless to do this without farmers' cooperation. Extension is now encouraging growers to cooperate so as to protect quality of all cotton, hand- or machine-picked.

A third program on cotton ginning already has produced more than \$9 million in larger returns each year for some time. Machine-picked and rough-harvested cotton requires new gin equipment and methods to maintain fiber quality. Without these changes, grade losses cut farmers' returns heavily.

Due to an aggressive training program over the years, with more than 1,000 gin operators attending in 1955, grade losses due to rough preparation have been cut sharply. The average share of the crop grading as rough dropped from 7.1 percent for 1939-46 to 1 percent or less for each year 1951-55. Based on a 15 million bale crop, this cut of 6 percent in cotton ginned roughly means 900,000 bales worth about \$10 more per bale, or \$9 million increased crop value per year for just this one phase of better ginning.

Significantly, all the facts for this educational program came from research scientists in the Department of Agriculture's cotton ginning laboratories.

#### Skillful Management

Interwoven with production practices are innumerable management decisions on how to fit hundreds of production steps together during a year's work on a family farm. These decisions have become extremely important; the average value of all assets per farm worker has climbed sharply since World War II -- from \$7,770 in 1946 to \$14,400 in 1956. It's mighty expensive to make mistakes these days. With such conditions farm people turn increasingly to qualified persons for management counsel. These advisors include bankers, FHA field men, farm managers, extension personnel and others.

\* \* \* Take the Kansas family, for example, which inquired about farm planning help from their county agent. The family income was low, their farm work kept them at home 365 days of the year, and they could not hire a man because their farm business was too small.

Using farm planning procedures the family studied their different choices. They found that by making minor changes in land use and shifting from grade A dairying to beef steers and hogs, they could expect to increase their income from \$3,600 to \$5,200--without increasing production. Besides higher income, these changes cut the labor needed so they had more freedom to enjoy their higher level of living.

\* \* \* It's extremely difficult, of course, to prove that educational work has produced better management ability. Yet many "straws in the wind" show this to be the case, as the Madison County, New York, agent writes:

".....When one man tells you that he has been stimulated to refinance his debt load from 3 or 4 creditors to one, thus bringing his monthly payments to a point where he can breathe again....when a farmer takes his figures to his banker and obtains a loan for a new roof to save his barn....when a farm wife obtains a license to sell insurance during her free time rather than take full time secretarial employment to help pay for a farm....when a father decides to sell the farm to his son on a longtime contract and to prepare a will for the first time....when a son purchases a farm to make room for a brother on the home farm, there is evidence that longtime thinking and planning have occurred."

### Careful Marketing

But production, no matter how efficient, and management, no matter how skillful, are only part of the job. Marketing is the next step in moving the original pork, cotton, grapes, wheat, or lumber to the final consumer. Efficient marketing calls for knowledge of seasonal production and price patterns, careful choice of time and place to sell, grading for quality, shrewd bargaining, and other vital factors. Here are some examples of extension marketing activities.

\* \* \* Kentucky extension workers have long recognized the problems of unemployment in eastern counties and underemployment of many rural people over the State. After studying the situation and possible answers, they cooperated with others to encourage strawberries for the commercial market as one possible way to increase income. However, as the production program gained momentum, marketing deficiencies showed up. So State specialists explained these weaknesses and possible answers in a series of county meetings.

As a result growers formed two farmers' cooperative marketing groups in eastern Kentucky. The co-ops sold the crop successfully and needy farmers have thereby profited.

As for immediate gains, strawberry acreage increased from 1,546 acres in 1955 to 3,315 acres in 1956. Many farmers say they're growing strawberries this year because they have an orderly, dependable marketing system for their crop. A full-time marketing agent has been assigned to train market managers in the area on merchandising.

The Somerset area shows what longtime progress can be made. Strawberry income climbed from only \$2,000 in 1947 to \$304,000 in 1955. Only 15 growers took part in the marketing program in 1947, compared with 1,600 in 1955. Further expansion is expected this year.

\* \* \* In North Dakota an integrated program aimed at improved marketing potatoes has been under way in the Red River Valley since 1949. One specific achievement during 1955 was the development of a potato market news service in cooperation with the Red River Valley Potato Growers' Association. By radio and newspaper the extension service provides growers and shippers with daily market prices f.o.b. valley loading points and for Chicago. Growers and shippers alike have appreciated this service highly.

Other improvements include:

1. Assistance to the North Dakota Potato Control Board to expand this year's promotional campaign in selected big-city markets.
2. Cooperation with machinery dealers and manufacturers. USDA potato research workers, and the growers' association to conduct potato harvester operators' schools. Skillful operators cause little damage when harvesting potatoes.
3. Educational work on marketing orders; grower-shippers approved them during the year.
4. Operation of compulsory inspection and grade identification throughout this past market year.

\* \* \* Washington apple growers fortunately marketed their large 1955 crop in an orderly manner, thanks to extension and other aid. Production, up 24 percent over the year before, was the largest since 1950. The crop matured two weeks late to further complicate the marketing problem. And the trade was not fully aware of this situation until the extension marketing specialist met with dealers, co-op managers, county agents and growers to stress the need for pushing sales rapidly throughout the marketing season. Growers and market agencies were urged to move the crop rather than store and hold it.

The result was fairly orderly marketing of the crop with no buildup of stocks and no dumping at the end of the season, as happened 5 years earlier. Despite slightly lower prices, this outlook information saved Washington growers and the apple industry millions of dollars.

\* \* \* A different aspect of marketing is the market information program for consumers. It is carried on mostly through newspapers, radio and TV. The case of low milk consumption in the Mahoning County, Ohio, schools is a bit different though. A survey by a local committee showed only two schools belonged to the special school milk program. Consumer marketing specialists then explained the school milk program to school officials and dairy company personnel. Committee members and the local newspaper urged schools to participate. Less than 5 months after the project began, 56 schools were taking advantage of the program, to the benefit of thousands of youngsters attending.

\* \* \* And from Alcorn County, Mississippi, comes a fine example of overall town-country cooperation in providing a new market. Farmers expanded their corn and hog production in 1955 to use diverted acres taken out of cotton. But their cash income from these products was low, due to inadequate market facilities. Everyone recognized this. So in setting up community goals for 1956, business men who are part of the overall program, agreed to help improve the market situation. First several farmers and business men visited Mississippi State College for advice on a market center to include processing and packing facilities for locally grown products. After local discussion, the project is now a long-range goal of the whole community.

Other broad problems where people seek extension aid are credit, cooperatives, social security, and income tax and other important matters.

#### SOLVING HOME PROBLEMS

The fast-changing pattern of modern living challenged home economics extension staff to the utmost in 1956. And they responded nobly by assisting a record high number of 6,135,000 families to adopt one or more better homemaking practices. This represents 7 percent more families than 1954.

From these figures, two facts carry great significance. First, the total number of families assisted has almost doubled in only 4 years--from 3,375,000 in 1952 to the present 6,135,000 families. Second, of those 6,135,000 families aided in 1955, 37 percent were farm families, 24 percent were rural nonfarm families, while 39 percent were urban households. Even more significantly, these 1955 figures are a gain of only 1 percent in farm families, but are gains of 8 percent in rural nonfarm homes and 13 percent for urban families. Increased urban assistance is due in part to use of mass media and to interest in consumer buying program.

These achievements have taken place in a setting of marriages at an earlier age, young families having nearly twice as many children as during the depression, and more and more wives working away from home. Even on farms, one million wives now work outside their home to increase family income, says a USDA report. Higher standards of living, greater risks of farming and the cost-price squeeze are important parts of the picture too.

All these conditions have brought heavy pressure on extension for aid with homemaking problems. The largest increases in requests from homemakers were for keeping and analyzing home records--18 percent, family financial planning--15 percent, and child development and guidance--12 percent. The first two reveal the effects of the cost-price squeeze, while the latter expresses the prime concern of most parents.

These figures, and those in the table, assistance to homemakers, on page 9, are impersonal. Some examples may help give tangible, human meaning to them.

\* \* \* The W. E. D.'s, a young couple with three children, live and work on 104 acres in the Rio Grande valley in New Mexico. They own 69 acres, which are planted to cotton, corn, and alfalfa; they rent the other 35 acres, which are planted in alfalfa. The farm provides their only income.

Besides housekeeping and child care, Mrs. D. does regular farm work; she drives a tractor, mows hay, chops and weighs cotton. Their house was small and poorly arranged, with inadequate equipment and furnishings, but they had no money for improvements.

Mrs. D. called on the home demonstration agent to help her with laborsaving arrangements in her home and management practices to reduce family living costs. Through careful planning and family labor, the D.'s remodeled their home, repaired or replaced furniture and equipment, and repainted. Now they have a comfortable, convenient home that will serve their family for several years.

Raising a garden and other good management practices have cut their food bill from \$1,560 down to \$360 per year, according to Mrs. D.'s records. She also learned home sewing and furniture repair from the home agent. These skills saved another \$500.

As a result the family is better fed, better clothed, and better housed without going into debt. More important, they have gained new management skills that assure a much brighter future for their farm and home.

This is a fairly typical example of home management assistance given to thousands of young farm families. Regardless of location or income, the quality of family living depends greatly on management skill of the homemaker. The way she decides to use the income for food, clothing, house equipment, and furnishings and other family needs determines the health and welfare of all family members. And there's only a narrow margin for error in most family living budgets.

\* \* \* Here are other typical examples of how home agents help families meet the cost-price squeeze:

Arkansas home demonstration agents, asked for help on furniture repair, trained 446 women as local leaders who in turn taught their neighbors. In a few months 2,500 pieces of furniture had been repaired at estimated savings of \$37,500.

Reports from women in 29 Texas counties showed an estimated savings of \$192,000 as a result of learning how to sew for their families.

Most of the requests from homemakers were for help in foods and nutrition. This is natural, because foods take the largest share of the family's dollar and homemaker's time. This subject accounted for almost one-fourth of all improved homemaking practices adopted in 1955.

Strangely though, we're not as well fed as we may think. Surveys show repeatedly that farm folks often do not get enough calcium, vitamins A and C, and even protein in some cases. Also, a Wisconsin study showed that farm families generally spent more for food than for any other item in their budget.

All this--even though farm families can produce much of their own food. And even though Alabama farm family records show that food produced and used at home is valued at a hefty \$1,000.

\* \* \* To eat adequately and at lower cost, North Carolina is promoting a long-range, cooperative campaign to drink more milk. "Nature's perfect food" provides much of our calcium and some protein. Still, through their own survey Tar Heel home demonstration club women discovered that 51 percent of them drank no milk.

Teaming together in the joint program were extension specialists in dairy, agronomy and nutrition, the Dairy Producers' Association, State department of agriculture, and the Dairy Council. Extension specialists trained both farm and home agents on methods to inform people on (1) the value of milk as a food, (2) producing good quality milk, and (3) feeding the family cow. They also stressed the school lunch program as one way to help more people accept milk in their diet.

Through newspapers, radio, TV, magazines, demonstrations, booths at fairs, special events with free milk, posters, talks, club programs, slogans and other methods, the program was carried on.

#### Results?

Home demonstration club women checked in 1955 and found that 55 percent of them were drinking the recommended two glasses of milk a day compared with 24 percent drinking this much in 1951.

Milk consumption had increased  $8\frac{1}{2}$  percent the first 9 months of 1955 over the same period in 1954.

Union Grove school children are now drinking 43 percent more milk.

In Henderson County, school principals have installed coolers for milk and ice cream.

A Martin County homemaker reports: "Others can report new furniture and bathrooms, but we have a milk cow."

There are hundreds more such evidences of progress from this campaign.

\* \* \* Overweight is another widespread nutritional problem. Iowa research studies indicate that about 50 percent of farm women 30 years or older are overweight. Iowa home demonstration club women sought extension help to cut down health hazards caused by overweight. Working with health and medical authorities, home agents emphasized eating more vegetables, fruits, and milk. For example in Plymouth County eight "weight watching" groups were formed. While all were not equally successful, some members lost as much as 50 pounds at the end of 7 months.

Indiana and Virginia among many others have conducted co-operative statewide weight control campaigns. Involved in one or both States were State board of health, State Heart Association, State Medical Society, extension service, and Dairy Council.

In Indiana during 12 months following enrollment in classes, 64 percent--nearly two-thirds--of these people had lost from 1 to 19 pounds each; 13 percent had lost between 20 and 49 pounds.

In Virginia this effort aroused considerable new interest in good food habits. It also made nutritionists aware that many people still do not know how to provide "good meals," nutritionally adequate. One homemaker who lost 33 pounds says of her family: "They are better fed because I now provide more vegetables, fats, and milk for all. They like it." Several Norfolk County women reported their family lost weight with them and feel better. "I learned how to cook the right kinds of food so they would be tasty." Others told of keeping better "snack" foods on hand for their teenagers.

\* \* \* Turning to work with urban families, the homemaking needs and interests of rural and urban families are essentially the same. Both want and need help in managing time, energy, and money so their families will be well fed, clothed and housed. Home agents rely heavily on press, radio, and TV to reach urban women, especially with tips on food buying and nutrition. They also co-operate with other agencies including industry, in direct-contact teaching.

In Berkshire County, Massachusetts, the home demonstration agent holds weekly, noontime meetings for women workers in a large factory. The women helped plan the program to cover their most pressing problems.

In Baltimore the extension agent and the Baltimore Housing Authority together set up a demonstration apartment furnished at low cost (\$158). The apartment is open to the public. Two vocational high schools have helped with this project to aid low income families to furnish their homes adequately and at low cost.

#### 4-H'ERS LEARN SKILLS AND CITIZENSHIP

The 4-H motto, "To Make the Best Better," reveals the nature of this self-help program for rural and suburban young folks 10 through 21 years of age. They can choose from about 50 projects ranging from growing corn to developing their own leadership abilities. These projects are based on real-life situations and

centered on practical work. From this experience they learn farming and homemaking skills, as well as grow into useful citizens. In short the 4-H program helps young people develop their own goals for personal and social growth. More than 18 million boys and girls have taken part in club work at some time.

#### 4-H Benefits Many

Actual experience of members is the best way to portray the true, deep-reaching scope and influence of 4-H work. Belonging to 4-H produces personal, family, community, and county benefits, rich gains acquired no other way. As one Illinois 4-H girl put it so maturely: "4-H has taught me to lose, as well as to win."

\* \* \* Personal gains--money for his college education--have come to C. C., Washington County, Arkansas. Starting 5 years ago with 500 chicks as his project, he has since expanded so he now has two broiler houses holding 4,000 birds. He averages \$1,200 to \$1,400 a year income from broilers. He also sells grade C milk from four dairy cows and fattens out barrows from two Hampshire brood sows. Living only 12 miles from the University, C. C. is working his way through the College of Agriculture with these 4-H projects. He says 4-H work influenced him strongly in deciding his career plans. He expects to return to the farm after college.

\* \* \* On family benefits from 4-H work, read the story of D. A., Plainwell, Michigan:

"Dad gave me a heifer to get me started in 4-H work when I still was in grade school. I earned a second heifer riding the hay baler. Both Holsteins had heifer calves and I soon had a four-cow herd. After the folks bought an adjoining 100 acres, Dad offered me a partnership agreement. I contributed my four cows, furnished the labor for milking and invested the money I earned in more cattle. I got one-third of the returns.

"During my senior year in high school, I gave Dad \$1,000 to even up the partnership.

"Dad encouraged me to take more responsibility all through my teens. The partnerships he offered me were a wonderful help. But perhaps his greatest gift was an example of good farming.

"After I got married, Dad decided to sell the farm to me. I pay the folks \$300 a month for as long as they live, gradually paying off the purchase price."

\* \* \* 4-H homemaking projects often produce enriching values for life also. J. H., Waukesha County, Wisconsin, modestly writes: "It was during this period (18 months of her mother's illness and finally death) that I really appreciated, and my family also, all that I had learned in my 4-H club work. I took over the complete management of our household doing all the cooking, laundry, cleaning, and everything else that needed to be done. The experience that I gained during that time, I know, will be of great value in my future years as a wife and mother."

\* \* \* The 4-H program reaches out into community service projects also, from which both the 4-H'er and community benefit. In the town of Maricao, Puerto Rico, B. B. tells how 4-H and the local Department of Health teamed together to combat anemia or uncinariasis, a major health problem.

"Our country people need proper education and information about the sickness," writes the 4-H'er. "As vice president of my 4-H club and as leader of my community I have contributed by personally teaching my neighbors how the anemia is controlled, how to prevent it and how to fight it. I have distributed reading material and helped exhibit a picture titled 'uncinariasis.' ....I have persuaded many people to take advantage of this (Department of Health) service (on free excrement examinations) and advise those who have anemia to follow the doctor's prescriptions very carefully which is a benefit for themselves....I helped with a census....so that these people may have a new latrine for their home...."

\* \* \* 4-H projects produce lasting gains for the whole county too, as in Jackson Parish, Louisiana. A new dairy industry there now brings in an added \$150,000 a year income and still is growing rapidly. The credit goes almost entirely to 4-H members.

Parish Agent W. C. Abbott, Jr. says about 10 years ago nine purebred dairy calves were placed with Jackson Parish 4-H'ers. These members were so successful with their animals that by 1955 the number of purebred animals owned by 4-H'ers had increased to 70.

During that time three former 4-H members have gone into the dairy business and own a total of 120 purebred cattle. Ten years ago there were four commercial dairies in the parish. Now there are at least 15. Then dairying was a \$30,000 yearly business. Now it adds about \$150,000 to the income of Jackson Parish farmers.

The dairy business in the parish is not large. But it is sound and growing, with emphasis on better quality cattle. The growth came largely from the example of successful dairying set by 4-H boys and girls.

\* \* \* 4-H'ers learn sound marketing and business principles as well as efficient production. A 4-H Club cooperative has been operating for several years in six southeastern Kentucky counties. Each of the 128 members grows one-fourth acre of strawberries. Jackson County reports that 11 members sold 1,200 quarts at 35 cents each and received \$420 among them. Some years the members earn extra income by also selling plants.

In West Virginia complete records from 50 club members show they earned an average labor income of \$200. Originally they had each invested about \$50 in their one-fifth acre plots of strawberries. The top six members averaged \$468 profit each.

Besides marketing, consumer education or better "buymanship" is a useful 4-H homemaking project. Santa Barbara County, California, conducts a shopping tour to encourage more careful buying of food. Trips into the State deal with buying clothing and home furnishings. Idaho carries on a similar program.

#### YMW Work

Related to the 4-H program is young men's and women's (YMW) work. This joint effort of all extension workers is designed for young people 18 to 30 years of age. Last year 290,000 young adults took part in YMW work. Frequently YMW clubs undertake some community service projects. In Union County, Pennsylvania, one club took the lead in landscaping the community hospital. Members raised \$350 and then planned and planted the shrubbery. Other clubs in Minnesota and Utah hold 1-day to 1-week educational meetings on topics like using credit wisely, bringing up children, soil care and refinishing furniture.

#### Present and Future Problems

But despite solid progress on many fronts, 4-H, like any organization, faces knotty problems. Even with only one-seventh of our population living on farms, still by 1960 the 4-H age group on farms will increase an estimated 13 percent over the number in 1950 and the potential rural nonfarm 4-H'ers will jump an estimated 40 percent. Aside from the future, only 18 percent of all rural farm and nonfarm young folks now enjoy a 4-H experience during any given year. Clearly Extension is not keeping pace with present or future possible service, even in rural areas.

The Blackhawk County, Iowa, staff and 4-H leaders are seeking ways to serve more 4-H members. A study revealed that only one-third of the boys and girls of 4-H age in unincorporated areas

belonged to 4-H Clubs. So the adults formed a county 4-H evaluation program. Results were gratifying. Instead of 1 club per township, they now have as many as 6. The number of organized clubs has increased 40 percent.

A second problem is the potential for work with youth 15 to 20 years old. Only 19 percent of total 4-H membership falls into this age group. When surveyed in 1955 State leaders suggested five new programs to attract and hold the interest of this upper age. Since then project outlines have been developed for

- automotive care and safety
- career exploration
- community development
- personal improvement
- farm family business training.

The automotive care project actually started operation this year.

In addition, the 4-H program faces other basic problems:

1. Recruiting and training professional personnel.
2. Recruiting, training and servicing volunteer adult leaders.
3. Getting more volunteers in communities to assume the responsibility for the youth program through committees, councils, or other means.
4. Adjusting the 4-H Club program to increase tenure and better serve the needs of members at the various stages of maturity.
5. Involving older youth in farm and home unit approach, program projection, marketing.
6. Helping youth to explore career opportunities in home economics, agriculture, and related fields.
7. Finding a way to more adequately serve the needs of youth in low income areas, suburban or fringe areas.

These problems require looking far ahead. In 1946 the National Advisory Group on 4-H Postwar Programs did just that with similar problems then. These county, state and Federal workers set up 10 guideposts such as developing talents for greater usefulness, learning to live in a changing world, and choosing a way to earn a living. Progress on some has been noteworthy. For instance, the new project

on automotive care and safety, begun this year, expresses the principle of learning to live in a changing world. Likewise, the International Farm Youth Exchange program, begun in 1948, gives concrete meaning to the guidepost of Service as Citizens in Maintaining World Peace.

#### Adjusting to the Future

4-H, with all of Extension, is now looking far ahead again by means of program projection. 4-H is adjusting its program as needed to meet such changes as fast-rising interest of suburbanites in 4-H Club work. In Marin County, California, bordering San Francisco, the present population of 110,000 is expected to reach 200,000 in the next few years. This means not only less farm land, but more suburban 4-H'ers.

Already projects in entomology, riding horses, electricity, woodworking and home economics have become popular, largely due to suggestions by county workers. New projects, especially for boys, are being developed. The county board, in approving Extension's budget unanimously, commented that 4-H Club work was doing much to provide a wholesome, healthy outlet for young people and that the taint of juvenile delinquency was far removed from this work.

In Michigan, the private 4-H Club Foundation has turned over \$19,000 to Michigan State University to finance the salaries of four urban 4-H Club agents to be assigned to Detroit, Flint, Grand Rapids, and Kalamazoo.

In every way possible 4-H is trying to plan ahead soundly and keep pace as best it can with demands upon it.

#### IMPROVING OUR OWN EFFORTS--THROUGH TRAINING AND RESEARCH

Like all educators, extension staff members--Federal, State, and county--must always keep themselves trained to the fullest in subject matter facts and educational methods. This knowledge and skill naturally makes them more effective teachers and leaders. People respond better to such a person and thus adopt needed improvements faster--to their own benefit. But it's also a constant task for extension staffers to keep up to date in both facts and methods.

\* \* \* One Nebraska county agent is grateful for a short course in plant diseases he took with 14 other agents in January 1955. Soon after that he moved to a new job in an area with different crops.

"Two of the early calls involved sugar beet troubles," he writes. "In the first case I was able to identify the trouble as Rhizoctonia, which was confirmed by the Scotts Bluff Experiment Station. The second case was plainly nematodes and I was able to impress on the farmer the need for proper rotation to minimize nematode damage.... I am really thankful that I took this course, because I'm sure that if I'd fallen down on these things, the first impression of the farmers who were in trouble would have been that I didn't know my stuff."

County extension workers need efficient training to handle their potential workload.

#### Types of Training

Training includes preservice instruction to prepare for an extension career, induction training when starting on the job, inservice professional improvement on the job, and graduate training. Inservice training must prepare experienced agents to train local leaders to expand the educational program.

\* \* \* On preservice training, 42 colleges now offer undergraduate courses to prospective extension workers. To improve this instruction, 48 persons from 29 States studied ways to make extension work vivid to undergraduates at a 2-day conference, March 22-23, 1956, at Knoxville, Tennessee. This sixth annual conference also was concerned with study in the 11 graduate schools which give master's degrees in extension curricula.

\* \* \* After employment comes induction training to help new workers to become confident, effective members of the team as soon as possible. In 1955, 2,037 new workers were employed nationwide. Thirty-three States held induction training sessions for these new workers. In 18 States new agents were assigned to work with specially chosen experienced agents for training, while 18 other States trained their new workers individually.

\* \* \* Present staff members, 3,085 from 26 States, "polished up" their abilities through inservice training subject matter and extension methods during 1955. They attended special short-term schools, regional summer schools, workshops giving college credit, and took off-campus correspondence credit courses. Twenty-eight States now have named leaders of personnel training compared with 20 in 1954.

Extension staff members train local leaders to help carry on neighborhood and community educational work. In Arkansas, for example, 31,450 local adult and youth leaders, trained by extension

workers, passed on their training to 180,000 more families. And 24,165 Arkansas homemakers adopted improved housekeeping methods following local training meetings held by 2,500 trained community leaders.

County agents also need considerable training and skill to conduct effective personal farm visits. Extension studies show that in the lower half of the socioeconomic scale, twice as many farmers have no contact with Extension's program as in the upper half. Extension work has been intensified with the lower half through farm and home development during the past 2 years, largely through more farm visits. In training sessions agents were helped to perfect their methods of counseling with families.

\* \* \* Program projection, or longtime, total program planning, improved greatly in North Carolina in 1955, largely due to special training in this subject. County home agents wanted to study their present program planning procedures and use of time--to see if they were spending their time most wisely on important problems of their people. After a questionnaire survey in 1955 to show conditions then, a Federal Extension Service specialist held four 2-day district training workshops for all State and county home demonstration personnel. At these workshops criteria for a good program; methods of getting and using facts in program development; and ways of setting up goals, program planning procedures, and their evaluation were discussed.

After applying their training, home agents reported substantially more farm women helped plan their own educational programs during 1955 than formerly.

Out of 100 counties in North Carolina, 91 held program planning meetings in 80 percent of the home demonstration clubs; and two-thirds of all members took part in planning meetings at the community level.

At the county level, 31,187 council members (officers of local clubs) from 1,153 clubs helped plan their own county educational programs.

Other gains were equally noteworthy--the women chose more basic program topics to meet their county's important problems, and the home agents trained more women as local leaders.

Inservice training took other forms too. Sixty-three administrators from 47 States and the Federal office tackled problems of program, personnel, training, and administration at a 3-week workshop held at the University of Wisconsin in cooperation with the National Agricultural Extension Center for Advanced Study.

And in Missouri the State agents have helped each staff member work out for himself a definite schedule of professional improvement for the next 5 years.

One other aspect: For the past 2 years, "averages per agent" have been figured from county agents' annual reports. These show the comparative time used in various teaching methods. Administrators use these records to adjust educational program methods as needed.

#### Types of Research Studies

But training is only part of the story. Just as important are a multitude of research studies. Training seeks to keep all extension workers up to date on newest factual information and teaching methods. Research probes more deeply. It seeks to discover ways of improving the entire extension program. Both are continuing self-improvement efforts throughout extension ranks.

During the year 34 States carried on some type of extension research. Most of it dealt with organization, program planning, effectiveness of present programs, and teaching methods. Here are several examples.

\* \* \* About one-third of all farm families, roughly  $1\frac{1}{2}$  million, earn less than \$1,000 per year. It's a real problem to reach this disadvantaged, low-income group. However, research studies from Missouri, North Carolina, and Kentucky suggest that extension and other educational workers need to function within the informal network of human relationships if they are to motivate these people effectively. Other studies are now under way in West Virginia, Pennsylvania, and Georgia.

\* \* \* Another study centered on efficient organization. As county staffs expand, smooth State-county operations become more important. This nationwide survey sought to learn how many States have a policy of naming one agent to be in charge in a county where there are several agents, the basis for selection, special training given and related facts. Results showed that 35 States name one agent to be in charge; in 27 of these States the director selects this person. All findings from this study are being applied to strengthen the total organization.

\* \* \* A third case: A cooperative study with New York uncovered this significant finding--that booklets can reach many people who otherwise have no contact with extension work. More than 1,100 women wrote to Cornell for a bulletin on upholstering with foam rubber. A study revealed that....

1. Sixty percent had never been enrolled in women's home demonstration work.

2. Sixty percent had never used any other Cornell bulletin.

The bulletin proved most effective educationally, because....

1. Nearly one-third of the women used it immediately for self-instruction.

2. The booklet influenced some women to do new reupholstering jobs not previously planned.

Significantly, when asked for suggestions to make bulletins more useful to homemakers, the most frequent answer was "advertise them more."

Incidentally, a 1946 survey of 1,200 samples from bulletins for farm people showed that over half of them were high school and college reading level--too hard to understand. A similar analysis from 30 States during the past 3 years shows that nearly three-fourths of the publications are 8th to 9th grade reading level or below-average or easy to understand.

\* \* \* Finally, a study of an urban home demonstration program. Urban and suburban people the country over are calling more and more on extension workers for their services. Baltimore has employed a full-time home agent for about 8 years. An interview survey of home demonstration club members and nonmembers in 1955 showed that....

1. The home agent's TV program was being seen by 63 percent of the members and 33 percent of the other women in the city.

2. Seventy-four percent of the members and 32 percent of the nonmembers who saw the programs used ideas they learned from the programs.

This means that out of a total of some 250,000 homemakers in Baltimore, the home agent's viewing audience is about 85,000 women who are not club members and that 27,500 of these women are using ideas from that program. TV, as well as publications, can effectively reach nonextension participants.

Quite opposite from our own research studies, our foreign friends are coming to study our extension programs. During fiscal year 1956 the Federal Extension Service helped train the 754 foreign nationals from 78 countries and plan and supervise their tours.

## RECOVERING FROM DISASTERS

Nature's disasters also contributed to emergency calls on Extension personnel. Greatest of these was the California flood of Christmas 1955 when all 42 northern and central counties were deluged by an unprecedented general storm. Hardest hit agriculturally were Sutter, Humboldt, Del Norte, and Tulare Counties. One-quarter of Sutter County was flooded in less than 8 hours.

An overall estimate, made shortly after flood waters had receded, listed 4,926 farms and 220,292 acres in distress. There were 74 known dead. Private and public property damage exceeded \$170 million. Beyond estimate is the loss in fertile topsoil. Red Cross leaders called it the fifth worst disaster there since the founding of the American National Red Cross in 1881.

With the people facing a major disaster, University of California agricultural officials directed the State extension staff to give whatever assistance was called for in each flooded area, in any field not already served by another agency. Transfer of personnel from other counties, as required, was also authorized, as well as publication, on a top-priority basis, of needed emergency information.

At one time there were 52 State and county staff persons working out of the Marysville Agricultural Extension Service headquarters, giving aid to stricken home and farm owners.

And 37 different leaflets supplying general information and answering specific emergency questions were prepared in only 10 days, published in quantity for general use and distributed with great speed. To get this information to rural and urban people in need, extension administrators, farm and home advisors (county agents), specialists, the agricultural publications office, the university press, and the nearby Butte County secretarial staff worked Saturdays, Sundays, holidays, and nights.

The University of California Agricultural Extension Service, State and county, was equipped to act quickly. Staff people could move swiftly, because of the longstanding, county-State-USDA cooperative arrangement for conducting Extension work. In this disaster extension workers in each county, well acquainted with local people and the local situation, dropped their educational work and switched immediately to aid in emergency organization, providing information and services the circumstances required. They worked day and night until the emergency had passed.

In Sutter County flood waters covered 96,000 acres and 800 farm homes, plus 6,000 dwellings in Yuba City. Flooded cropland included:

20,000 acres of rice  
39,000 acres of other field and row crops  
7,000 acres of cling peaches  
10,000 acres of other orchards  
15,000 acres of pasture  
5,000 acres of farmsteads, roads, drainage ditches, and so forth.

About 230 farms suffered destructive damage and 7,500 acres of farmland sustained severe injury from washing or silting.

With no electricity and no means of mass contact to deliver emergency flood information, door-to-door contact proved successful. In only 5 days, a farm or home advisor had called on an estimated 4,500 of the 6,000 houses in Yuba City. Then followed the leaflets, including 20,000 copies of the Internal Revenue Service booklet on how the Federal income tax applies to flood losses.

As soon as electric power was restored, radio was used continuously to contact people. Newspapers were furnished the emergency leaflets, and in most cases published them verbatim. Fruit and rice dehydrators were listed so people could know where to take their flood-damaged mattresses and furniture to be dried. And farm advisors helped allocate more than 300 tons of emergency grain in a 10-day period. The grain was made available through the California Department of Agriculture.

After the emergency has passed, demands for information and advice came in great variety. A regular newsletter (Farm and Home Aids), two daily radio programs, more than 120 news articles, plans and directions for "do-it-yourself" reconditioning jobs and other means were used to supply needed information.

Special help to farmers took many forms; Checking temperatures of wet hay; seeking suitable replacement livestock, hay and feed supplies; advice on farm building and dwelling plans, including reconstruction, bracing, silt removal, and termite control; counseling on corral layouts and rehabilitation of flooded fields and orchards; sources of loans; income tax problems; farm planning; and costs of production, since many farmers were obliged to start new enterprises.

In the home, repair of electrical equipment, restoration of table tops and upholstered furniture, distribution of basic kits of sewing material and small cooking equipment--these and many other needs kept home advisors busy giving information.

Flood repair work on farms and in homes is expected to continue for many months.

Down in Tulare County, about 250 miles south, floods created an emergency there at the same time as in Sutter County. With an estimated 500,000 acres of farmland flooded, Tulare County had the largest area under water, but suffered far less damage than Sutter County.

Eleven farm or home advisors were called in from other counties to work with the Tulare County staff. During 3 days the group visited a total of 668 homes and 260 farms to give help. They worked closely with the county health department, Civilian Defense, Army engineers, Red Cross, Forest Service, Farmers Home Administration, Small Business Administration, and ASC committees. Sixteen thousand University flood emergency leaflets were distributed, plus 1,000 copies of two locally written articles on salvaging household equipment and sources of financial aid.

Massachusetts, heavily damaged about 1953 by hurricanes, was prepared as well as could be when "Connie" and "Diane" hit the Northeast in August 1955 and dumped rains that caused heavy flood damage. Just before the storms struck, all extension workers in the State received a hurricane information packet from the State headquarters. Fourteen mimeograph sheets dealt with do's and don't's, emergency labor, contaminated water, home freezers, crops, shade trees, livestock, and home furnishings. This ready information made the recovery job more efficient.

In other disasters, Washington experienced a sharp, prolonged freeze in November 1955. Apple and berry growers were hard hit. After county agents had surveyed the damage, the State horticultural specialist held a great many meetings the next spring for eastern Washington growers to help them decide whether to replant, graft new stock onto an old trunk, or turn to some other choice. In western Washington the effort was to save all possible planting stocks of strawberries, raspberries and other small fruits. Also, purely by accident, Washington State College had a new variety of strawberry and another of raspberry ready to introduce in 1956. This good fortune made it easier to recover from the damage.

Down in Florida within 2 weeks after the dreaded Mediterranean fruit fly was discovered in the spring of 1956, the University of Florida College of Agriculture had published a folder and distributed newspaper mats statewide. A gigantic cooperative eradication campaign was quickly organized, with State, USDA, county, and other agency teamwork.

### THE LOOK AHEAD

One foremost challenge faces all parts of the Cooperative Extension Service in the coming years. It is to attain a broad-scale, total, coordinated effort. Substantial progress has already been made toward this goal in the recent intensification of farm and home development work. The purpose here is to bring all available information and counsel together to bear on a family's total individual situation--with the family itself making the decisions.

Encouraging progress has already been made toward fully coordinated teamwork on two other programs--program projection and rural development. Program projection means total, long-range planning by all groups concerned with county educational work; the rural development program seeks to aid some  $1\frac{1}{2}$  million disadvantaged families over the Nation with less than \$1,000 yearly net income. These families make up more than one-fourth of all rural families.

Program projection seeks the broadest possible base for county agents to conduct an educational program keyed to people's most compelling needs. It does this by involving all groups concerned in widely cooperative planning of a 5- to 10-year program.

Rural development work was activated early in fiscal year 1957 under a \$640,000 appropriation from Congress to be allotted to States submitting proposals for intensive work of this type.

Underlying all of the Cooperative Extension Service's educational work is one hard fact: the job to be done. The average number of rural families to be reached is 3,740 for each agricultural agent, 6,114 for each home agent, and 2,963 for each youth (4-H) worker. These figures include rural nonfarm (small town) families but exclude urban families. Urban dwellers especially have increased their calls for Extension aid in recent years. To meet requests from all groups in the best possible way, extension workers dedicate their sincere utmost efforts.

For the fiscal year ended June 30, 1956, Arkansas and Puerto Rico were not paid the full amount of Smith-Lever funds because of failure to certify a portion of the prescribed amount of matching funds as required in Section 3c(2) of the Smith-Lever Act and the Department of Agriculture and Farm Credit Administration Appropriation Act, 1956.

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NOTE: For full details of results obtained in major activities of cooperative extension work for 1955, see the statistical report, Extension Activities and Accomplishments, 1955 (U. S. Dept. of Agr., Ext. Serv. Cir. 509, May 1956).



## UNITED STATES DEPARTMENT OF AGRICULTURE

## FEDERAL EXTENSION SERVICE

June 30, 1956

NUMBER OF COOPERATIVE EXTENSION AGENTS  
(Holding Federal appointment)

State or Territory	Number of Agricultural Counties <sup>1/</sup>	Directors and Assistant Directors				Administrative Assistants		Specialists		County Agricultural Work		County Home Economics Work		County Home Demonstration Agents <sup>2/</sup>		4-H Club Leaders and Supervisors		Total
		Supervisors	County Agents <sup>2/</sup>	Supervisors	Supervisors	County Agents <sup>2/</sup>	Supervisors	Supervisors	Supervisors	County Agents <sup>2/</sup>	Supervisors	Supervisors	Supervisors	County Home Demonstration Agents <sup>2/</sup>	4-H Club Leaders and Supervisors			
Alabama.....	67	2	4	38	7	241	7	169	3	471								
Arizona.....	14	2	-	10	-	24	1	11	2	50								
Arkansas.....	75	3	3	33	5	167	6	115	3	335								
California.....	58	4	-	64	4	283	4	86	8	453								
Colorado.....	63	1	1	24	6	77	2	42	4	157								
Connecticut....	8	2	-	31	1	26	1	20	2	83								
Delaware.....	3	1	1	14	1	7	1	5	1	30								
Florida.....	67	1	-	41	4	135	6	85	5	278								
Georgia.....	159	3	-	62	9	263	8	194	11	550								
Idaho.....	44	2	-	23	3	51	2	41	3	125								
Illinois.....	102	3	-	57	8	169	7	126	10	380								
Indiana.....	92	2	1	83	6	177	4	79	11	363								
Iowa.....	99	4	2	77	5	164	5	90	9	356								
Kansas.....	105	2	1	63	6	169	8	102	6	357								
Kentucky.....	120	2	2	43	8	215	5	120	12	407								
Louisiana....	64	2	3	51	8	176	6	138	6	390								
Maine.....	16	2	1	19	1	31	1	27	2	84								
Maryland....	23	1	1	35	4	60	4	50	4	158								
Massachusetts...	14	1	1	37	2	48	1	39	3	132								
Michigan.....	83	5	4	87	7	184	6	81	11	385								
Minnesota....	87	2	1	40	5	140	6	81	10	285								
Mississippi....	82	2	4	56	5	267	7	201	9	551								
Missouri.....	115	2	2	61	7	260	7	117	7	463								
Montana.....	56	2	1	22	3	64	2	28	4	126								
Nebraska....	93	2	3	51	7	119	5	54	5	246								
Nevada.....	17	2	1	8	-	20	1	9	1	42								
New Hampshire...	10	2	-	15	1	30	1	16	3	68								
New Jersey....	21	2	1	32	2	55	2	34	2	130								
New Mexico....	32	1	1	17	2	56	2	29	3	111								
New York.....	62	2	-	90	6	215	5	132	6	456								
North Carolina..	100	3	1	92	10	370	11	264	8	759								
North Dakota...	53	1	3	28	5	73	2	25	5	142								



## U. S. DEPARTMENT OF AGRICULTURE

## STATE SOURCES OF FUNDS ALLOCATED FOR COOPERATIVE EXTENSION WORK IN STATES, ALASKA, HAWAII, AND PUERTO RICO

## FEDERAL EXTENSION SERVICE

FOR THE FISCAL YEAR ENDING JUNE 30, 1956

STATES	Funds from Federal Sources			Funds from Within the States		
	GRAND TOTAL	TOTAL FEDERAL FUNDS	TOTAL WITHIN THE STATES	SMITH-LEVER ACT AS AMENDED JUNE 26, 1953	AGRICULTURAL MARKETING ACT* (TITLE II)	STATE AND COLLEGE
Alabama	\$ 3,125,234.68	\$ 1,636,494.84	\$ 1,488,739.84	\$ 1,617,339.84	\$ 23,155.00	\$ 845,739.84
Arizona	550,055.50	237,751.89	312,303.61	237,751.89	-	262,807.41
Arkansas	2,176,404.27	1,322,285.27	854,119.00	1,322,285.27	-	507,750.00
California	5,007,604.91	1,115,685.65	3,891,919.26	1,088,185.65	27,500.00	2,719,950.26
Colorado	1,311,803.00	457,655.27	854,147.73	452,780.27	4,875.00	447,402.73
Connecticut	751,921.26	238,647.26	513,274.00	230,232.26	8,415.00	279,434.00
Delaware	264,173.81	127,123.81	137,050.00	116,123.81	11,000.00	125,550.00
Florida	1,840,678.50	524,461.50	1,316,217.00	517,036.50	7,425.00	722,399.00
Georgia	3,268,395.05	1,719,070.05	1,549,325.00	1,685,872.05	33,198.00	766,250.00
Idaho	1,022,650.69	355,557.86	667,092.83	350,557.86	5,000.00	376,409.83
Illinois	3,811,830.15	1,360,594.15	2,453,236.00	1,347,494.15	13,100.00	1,021,236.00
Indiana	2,912,673.26	1,154,001.26	1,758,672.00	1,119,624.26	14,377.00	932,356.00
Iowa	3,012,113.99	1,262,085.99	1,502,028.00	1,222,035.99	40,050.00	959,813.00
Kansas	3,204,441.29	885,249.29	2,319,192.00	852,835.29	32,414.00	599,003.00
Kentucky	2,768,193.94	1,601,643.94	1,166,550.00	1,578,143.94	23,500.00	683,350.00
Louisiana	3,077,990.06	1,095,382.59	1,982,607.47	1,053,714.59	1,725,975.30	231,971.17
Maine	666,833.28	319,996.11	346,837.17	304,496.11	15,500.00	14,600.00
Maryland	1,667,417.38	450,483.99	1,216,933.39	146,140.99	34,343.00	934,012.39
Massachusetts	1,334,046.56	346,797.76	987,248.80	321,347.76	25,450.00	380,300.00
Michigan	3,857,939.50	1,314,249.86	2,543,689.64	1,223,649.86	90,600.00	1,831,884.00
Minnesota	2,260,862.57	1,187,883.00	1,072,979.57	1,168,758.00	19,125.00	511,006.00
Mississippi	3,185,127.00	1,682,755.08	1,502,371.92	1,658,139.08	24,616.00	796,000.00
Missouri	2,912,572.38	1,425,625.43	1,486,965.95	1,388,225.43	37,400.00	825,851.50
Montana	1,086,846.96	385,437.96	701,409.00	377,787.96	7,650.00	327,787.00
Nebraska	1,915,299.93	719,983.47	1,195,316.46	1,195,316.46	14,600.00	745,316.46
Nevada	353,562.99	166,231.55	187,331.44	166,231.55	-	103,243.00
New Hampshire	532,762.02	168,037.99	364,724.03	159,510.99	8,527.00	230,423.03
New Jersey	1,452,424.25	354,687.49	1,117,736.76	317,510.49	17,177.00	606,948.80
New Mexico	919,186.50	357,299.45	561,887.05	336,899.45	20,400.00	428,150.05
New York	5,253,274.03	1,180,602.77	4,072,671.26	1,145,602.77	35,000.00	1,718,578.73
North Carolina	5,573,712.54	2,161,349.54	3,422,363.00	2,130,706.54	30,643.00	2,083,390.00
North Dakota	3,085,802.36	531,100.86	554,701.50	517,700.86	13,400.00	803,692.00
Ohio	4,044,102.92	1,567,920.48	1,476,182.44	1,521,170.48	46,750.00	974,783.00
Oklahoma	2,511,384.40	1,187,501.40	1,323,883.00	1,135,347.40	52,154.00	343,000.00
Oregon	2,310,263.91	501,014.92	1,809,248.99	470,184.92	30,830.00	1,297,590.45
Pennsylvania	3,009,124.64	1,511,458.64	1,493,658.64	1,497,666.00	17,800.00	1,087,666.00
Rhode Island	218,227.24	92,755.74	125,471.50	89,593.74	3,162.00	98,571.50
South Carolina	2,228,072.92	1,166,406.12	1,061,666.80	1,158,918.12	7,488.00	915,000.00
South Dakota	1,225,316.28	519,206.28	706,110.00	515,756.28	3,450.00	488,490.00
Tennessee	2,970,111.50	1,619,932.89	1,350,178.61	1,595,385.89	24,547.00	883,607.61
Texas	5,467,489.17	2,669,863.80	2,657,625.37	2,599,712.80	10,151.00	1,022,937.84
Utah	708,667.16	282,661.18	426,005.98	268,828.18	13,833.00	300,675.00
Vermont	592,227.60	218,405.03	373,822.57	212,255.03	6,150.00	259,493.37
Virginia	3,232,766.15	1,306,011.15	1,926,755.00	1,296,191.15	9,820.00	1,511,429.00
Washington	1,765,582.48	612,480.14	1,153,102.34	595,982.14	16,498.00	666,959.00
West Virginia	1,415,316.30	798,016.42	617,299.88	795,816.42	2,200.00	374,465.00
Wisconsin	2,861,943.11	1,194,634.11	1,667,309.00	1,160,334.11	34,300.00	646,776.00
Wyoming	670,472.15	224,862.34	445,609.81	220,862.34	4,000.00	297,966.81
Alaska	165,640.00	73,306.18	92,333.82	70,306.18	3,000.00	92,333.82
Hawaii	650,724.39	233,961.78	416,762.61	219,551.78	14,410.00	239,934.88
Puerto Rico	2,055,678.65	1,283,280.65	360,107.84	34,000.00	349,000.00	1,020,533.00
Unallotted	-	-	-	-	-	147,643.00
Regional Contracts	285,000.00	-	-	-	-	-
GRAND TOTAL	\$ 109,912,053.42	\$ 45,475,000.02	\$ 64,437,053.40	\$ 44,155,000.02	\$ 1,320,000.00	\$ 37,839,773.21
						\$ 24,282,151.49
						\$ 2,315,128.70



U. S. DEPARTMENT OF AGRICULTURE  
FEDERAL EXTENSION SERVICE

\* EXPENDITURES OF FUNDS FROM ALL SOURCES FOR COOPERATIVE AGRICULTURAL EXTENSION WORK IN STATES, ALASKA, HAWAII, AND PUERTO RICO  
FOR FISCAL YEAR ENDED JUNE 30, 1955

BY SOURCE OF FUNDS AND TOTALS FOR 1950-1954

STATES	GRAND TOTAL	TOTAL		FEDERAL FUNDS		TOTAL WITHIN THE STATES		SIXTY-SEVEN ACT: CLARKE-MONARY : AS AMENDED : JUNE 26, 1953		FUNDS FROM FEDERAL SOURCES		FUNDS FROM WITHIN STATES					
		FEDERAL FUNDS		THE STATES		SIXTY-SEVEN ACT: CLARKE-MONARY : AS AMENDED : JUNE 26, 1953		AGRICULTURAL MARKETING ACT : (RMA-TITLE II)		FORESTRY		STATE AND COLLEGE		COUNTY		NON-PUBLIC SOURCES	
Alabama	\$ 2,895,619.43	\$ 1,449,523.50	\$ 1,446,095.93	\$ 1,471,452.57	\$ 1,620.00	\$ 16,450.93	\$ 843,756.11	\$ 602,737.52	\$ 195,275.67	\$ 77,915.46	\$ -	\$ -	\$ -	\$ -	\$ -		
Arizona	487,159.54	213,961.39	273,194.15	213,961.39	1,192,760.86	826,707.19	1,177,974.43	1,620.00	13,166.43	502,293.68	320,200.00	4,213.51	3,978.92	3,978.92	3,978.92		
Arkansas	2,019,468.05	415,051.47	415,051.47	415,051.47	929,647.74	3,540,599.48	928,027.74	1,620.00	-	2,506,122.42	1,030,496.14	2,346,417.03	2,346,417.03	2,346,417.03	2,346,417.03		
California	4,470,241.22	415,550.57	415,550.57	415,550.57	1,218,639.17	1,218,639.17	1,218,639.17	1,620.00	5,510.98	406,000.00	397,088.30	-	-	-	-		
Colorado	1,218,639.17	210,711.57	210,711.57	210,711.57	210,711.57	541,317.49	202,115.91	1,620.00	6,975.66	337,423.72	188,073.77	15,520.00	15,520.00	15,520.00	15,520.00		
Connecticut	752,029.06	117,932.45	117,932.45	117,932.45	117,932.45	139,476.67	106,932.45	1,620.00	11,000.00	126,350.00	1,094.56	12,033.81	12,033.81	12,033.81	12,033.81		
Delaware	257,411.12	449,527.67	449,527.67	449,527.67	1,610,153.81	1,610,153.81	1,610,153.81	1,620.00	1,620.00	637,205.81	507,187.98	16,197.35	16,197.35	16,197.35	16,197.35		
Florida	1,505,539.74	1,505,539.74	1,505,539.74	1,505,539.74	3,118,474.39	3,118,474.39	3,118,474.39	1,620.00	1,620.00	638,450.38	774,484.27	-	-	-	-		
Georgia	904,415.03	295,272.37	295,272.37	295,272.37	2,536,783.52	1,398,927.56	609,145.66	1,620.00	2,880.00	327,562.51	259,432.72	21,550.43	21,550.43	21,550.43	21,550.43		
Idaho	3,707,096.01	1,191,504.10	1,191,504.10	1,191,504.10	1,191,504.10	2,155,591.91	1,175,305.14	2,880.00	1,620.00	1,620.00	684,907.47	1,650,684.44	-	-	-	-	
Illinois	3,167,828.76	901,422.13	901,422.13	901,422.13	2,626,406.63	1,649,930.35	2,266,406.63	2,266,406.63	2,266,406.63	889,526.46	1,620.00	10,275.67	927,701.99	1,064,601.40	1,064,601.40	1,064,601.40	1,064,601.40
Indiana	574,184.36	272,950.54	301,233.82	301,233.82	301,233.82	361,103.39	361,103.39	361,103.39	1,620.00	1,620.00	25,924.14	507,282.92	262,604.33	262,604.33	262,604.33	262,604.33	
Iowa	2,930,345.74	1,109,996.40	1,109,996.40	1,109,996.40	1,109,996.40	786,962.12	2,211,999.01	2,211,999.01	1,620.00	1,620.00	22,015.96	559,218.35	1,632,070.66	305,246.01	305,246.01	305,246.01	
Kansas	3,004,961.13	1,398,927.56	1,398,927.56	1,398,927.56	1,398,927.56	1,137,855.96	1,388,310.40	1,388,310.40	1,620.00	1,620.00	6,997.16	681,050.00	456,805.96	26,750.00	26,750.00	26,750.00	
Kentucky	2,621,354.24	971,453.86	971,453.86	971,453.86	971,453.86	1,428,146.83	1,397,148.26	1,397,148.26	1,620.00	1,620.00	32,655.60	1,418,691.50	230,965.58	-	-	-	
Louisiana	574,184.36	272,950.54	301,233.82	301,233.82	301,233.82	361,103.39	361,103.39	361,103.39	1,620.00	1,620.00	25,924.14	507,282.92	262,604.33	262,604.33	262,604.33	262,604.33	
Maine	1,461,103.39	389,244.14	1,071,557.25	1,071,557.25	1,071,557.25	296,750.51	923,669.87	277,675.10	1,620.00	1,620.00	17,452.71	366,265.59	557,403.98	-	-	-	
Massachusetts	1,220,420.68	2,326,251.14	1,212,321.21	1,212,321.21	1,212,321.21	3,447,572.35	1,057,469.49	1,057,469.49	1,620.00	1,620.00	55,381.64	1,666,933.24	604,057.30	55,250.60	55,250.60	55,250.60	
Michigan	3,447,572.35	2,326,251.14	1,212,321.21	1,212,321.21	1,212,321.21	992,576.58	1,425,537.85	1,425,537.85	1,620.00	1,620.00	3,240.00	950,036.58	3,240.00	3,915.67	3,915.67	3,915.67	
Minnesota	2,080,046.37	1,425,537.85	1,425,537.85	1,425,537.85	1,425,537.85	2,919,527.58	1,428,417.09	1,428,417.09	1,620.00	1,620.00	21,434.18	2,233,705.18	1,620.00	25,914.00	25,914.00	25,914.00	
Mississippi	2,710,656.27	1,261,219.18	1,261,219.18	1,261,219.18	1,261,219.18	989,532.86	649,276.17	649,276.17	1,620.00	1,620.00	7,174.64	752,501.23	726,500.61	164,518.43	164,518.43	164,518.43	
Montana	1,322,178.73	287,484.70	1,322,178.73	1,322,178.73	1,322,178.73	836,328.35	319,353.80	319,353.80	1,620.00	1,620.00	390,819.56	390,819.56	-	-	-	-	
New Jersey	1,322,178.73	287,484.70	1,322,178.73	1,322,178.73	1,322,178.73	836,328.35	516,974.55	516,974.55	1,620.00	1,620.00	19,125.00	32,942.41	2,645,252.07	2,645,252.07	2,645,252.07	2,645,252.07	
New Mexico	836,328.35	516,974.55	516,974.55	516,974.55	516,974.55	981,639.35	5,177,076.62	5,177,076.62	1,620.00	1,620.00	1,550.92	2,025,205.02	1,550.92	2,531,824.55	2,531,824.55	2,531,824.55	
New York	6,158,715.97	1,248,329.19	1,248,329.19	1,248,329.19	1,248,329.19	1,248,329.19	1,248,329.19	1,248,329.19	1,620.00	1,620.00	1,598,132.19	1,598,132.19	1,598,132.19	1,598,132.19	1,598,132.19	1,598,132.19	
North Carolina	2,032,395.21	1,598,132.19	1,598,132.19	1,598,132.19	1,598,132.19	2,434,263.02	1,598,132.19	1,598,132.19	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	
Pennsylvania	2,589,483.71	1,427,892.21	1,427,892.21	1,427,892.21	1,427,892.21	1,611,590.50	1,427,892.21	1,427,892.21	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	1,620.00	
Rhode Island	1,871,456.64	107,089.44	107,089.44	107,089.44	107,089.44	80,396.20	1,029,527.53	1,029,527.53	1,620.00	1,620.00	22,506.10	715,085.28	960,876.00	-	-	-	
South Carolina	1,089,360.46	1,022,475															

